

Abstract of the Disclosure

The present invention is directed to oligonucleotides used as amplification primers and assay probes for species-specific detection and identification of the protozoan *Perkinsus* in shellfish. The oligonucleotides are designed to preferentially hybridize to what has been found to be a species-unique sequence in the target organism's genome. Preferential hybridization means, for example, that the inventive primers amplify the target sequence in *P. marinus* with little or no detectable amplification of target sequences of other species of protozoa such as *P. atlanticus* thereby making the assay species specific.